

In the claims:

**Please amend claim 87 without prejudice as follows:**

87. (Currently Amended) A method of detecting a presence or an absence of a target nucleic acid sequence in a sample, the method comprising the steps of:

- (a) contacting the sample with an oligonucleotide system under hybridization conditions so as to form a reaction mixture, said oligonucleotide system including an anchor oligonucleotide and an amplifier oligonucleotide, each of said anchor and said amplifier oligonucleotides including a first region complementary with the target nucleic acid sequence, each of said anchor and said amplifier oligonucleotides further including a second region, said second regions of said anchor and said amplifier oligonucleotides being at least partially complementary and thus capable of forming a duplex structure including a nucleic acid cleaving agent recognition sequence following hybridization of said first regions of said anchor and said amplifier oligonucleotides with the target nucleic acid sequence, said anchor and said amplifier oligonucleotides are selected such that when hybridized with the target nucleic acid sequence in a presence of a nucleic acid cleaving agent recognizing said nucleic acid cleaving agent recognition sequence, only said amplifier oligonucleotide is cleavable by said nucleic acid cleaving agent, wherein cleavage of said amplifier oligonucleotide leads to dissociation of said amplifier oligonucleotide from the target nucleic acid sequence while said anchor oligonucleotide remains hybridized to, and does not dissociate from, the target nucleic acid sequence to form a stabilized anchor oligonucleotide-target nucleic acid sequence

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hybrid<sub>1</sub> thereby allowing a second and uncleaved amplifier oligonucleotide to hybridize with said anchor oligonucleotide-target nucleic acid sequence hybrid<sub>1</sub> thus enabling recycling of said anchor oligonucleotide-target nucleic acid sequence hybrid with respect to said amplifier oligonucleotide<sub>2</sub>;

- (b) adding said nucleic acid cleaving agent to said reaction mixture under predetermined reaction conditions, such that, if the target nucleic acid sequence is present in the sample, said nucleic acid cleaving agent recognition sequence is cleaved by said nucleic acid cleaving agent; and
- (c) monitoring cleavage of said nucleic acid cleaving agent recognition sequence by said nucleic acid cleaving agent;

wherein cleavage of said nucleic acid cleaving agent recognition sequence by said nucleic acid cleaving agent indicates hybridization of the oligonucleotide system to the target nucleic acid sequence and therefore the presence of the target nucleic acid in the sample.

88. (Previously added) The method of claim 87, wherein under said hybridization conditions said first region of said amplifier oligonucleotide is stably hybridizable with said target nucleic acid sequence only if said first region of said anchor oligonucleotide is stably hybridizable with said nucleic acid target sequence.

89. (Previously added) The method of claim 87, wherein at least one nucleotide or internucleotidic bond of said anchor oligonucleotide which forms a part of said nucleic acid cleaving agent recognition sequence includes a modification selected so as to prevent cleavage of said anchor oligonucleotide by said nucleic acid cleaving agent.

90. (Previously added) The method of claim 87, wherein said duplex structure is formed in part by self annealing of a portion of said second region of said amplifier oligonucleotide.

91. (Previously added) The method of claim 87, wherein a sequence of said first region of said anchor oligonucleotide is selected such that said anchor oligonucleotide remains annealed with said target nucleic acid sequence under said predetermined reaction conditions, whereas said sequence of said first region of said amplifier oligonucleotide is selected such that said amplifier oligonucleotide dissociates from said target nucleic acid sequence under said predetermined reaction conditions, following cleavage of said nucleic acid cleaving agent recognition sequence by said nucleic acid cleaving agent.

92. (Previously added) The method of claim 91, wherein a  $T_m$  of said first region of said anchor oligonucleotide is at least 10 °C higher than said  $T_m$  of said first region of said amplifier oligonucleotide.